

(19)日本国特許庁 (JP)

(12) 登録実用新案公報 (U)

(11)実用新案登録番号

実用新案登録第3094197号

(U3094197)

(45)発行日 平成15年6月6日(2003.6.6)

(24)登録日 平成15年3月12日(2003.3.12)

(51)Int.Cl.

B 62 J 39/00
6/08

識別記号

F I

B 62 J 39/00
6/08

K
Z

評価書の請求 未請求 請求項の数4 OL (全6頁)

(21)出願番号

実願2002-7395(U2002-7395)

(73)実用新案権者 502421985

張 達碩

台湾台北市文山区久康街131號1F

(22)出願日

平成14年11月21日(2002.11.21)

(72)考案者 張 達碩

台湾台北市文山区久康街131號1F

(74)代理人 100082304

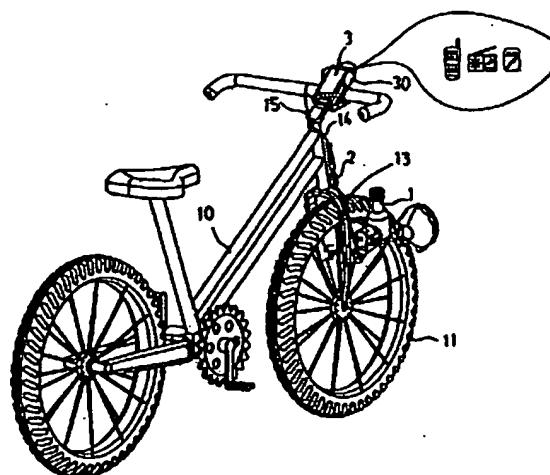
弁理士 竹本 松司 (外4名)

(54)【考案の名称】 自転車の電力供給及び充電装置

(57)【要約】

【課題】 自転車の電力供給及び充電装置の提供。

【解決手段】 自転車の車輪側部に取り付けられて車輪の摩擦により駆動され発電する発電機装置を利用し、導線で発生した電気を整流変圧器に送り対応する電流と電圧に変換した後、携帯電話、ページャ、ラジオ、携帯情報端末装置或いは二次電池等の携帯型電器設備に供給し、自転車に乗る時、携帯型電器用品に簡単快速に電力供給と充電が行え、コンパクトで、電力不足状況を心配する必要をなくす。



【実用新案登録請求の範囲】

【請求項1】 自転車の電力供給及び充電装置において、該自転車の電力供給及び充電装置は、発電機装置、整流変圧器及び携帯型電器設備が組み合わされてなり、該発電機装置が自転車の車輪側部に取り付けられて車輪の摩擦により駆動されて発電し、導線で発生した電気が整流変圧器に送られて対応する電流及び電圧に変換され、更に携帯電話、ペーパーラジオ、携帯情報端末、或いは二次電池等の携帯型電器設備に外接されることを特徴とする、自転車の電力供給及び充電装置。

【請求項2】 請求項1に記載の自転車の電力供給及び充電装置において、整流変圧器と携帯型電器設備の間が挿入式の連接線で連結され、異なる形式の連接端子を具えた携帯型電器設備との連接使用に供されることを特徴とする、自転車の電力供給及び充電装置。

【請求項3】 請求項1に記載の自転車の電力供給及び充電装置において、整流変圧器が調整式の構造とされ、交流、直流或いは異なる電圧出力に切り換えられることを特徴とする、自転車の電力供給及び充電装置。

【請求項4】 請求項1に記載の自転車の電力供給及び充電装置において、発電機装置の発生する電気が切り替えスイッチの切り換えにより自転車の前照灯或いは整流変圧器に出力されることを特徴とする、自転車の電力供給及び充電装置。

【図面の簡単な説明】

【図1】本考案の実施例の立体図である。

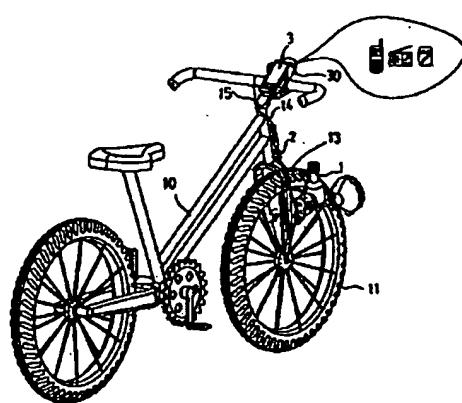
【図2】本考案の実施例の回路図である。

【図3】本考案の実施例のもう一つの回路表示図である。

【符号の説明】

1 発電機装置	2 整流変圧器	3 携帯型電器設備
10 自転車	11 車輪	12 前照灯
13 導線	14 連接線	15 プラグ端子
16 切り替えスイッチ	30 ホルダ	

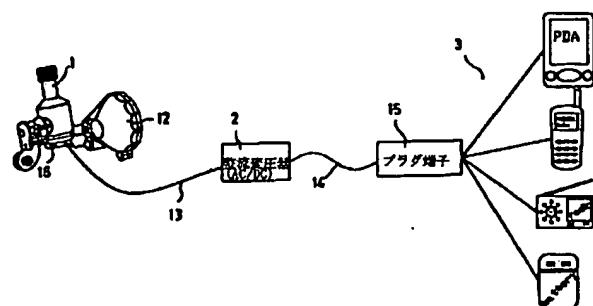
【図1】



【図2】



【図3】



【考案の詳細な説明】**【0001】****【考案の属する技術分野】**

本考案は一種の自転車の電力供給及び充電装置に係り、特に、自転車に乗る時に、いかに携帯型電器用品に電力供給及び充電するかの問題を解決するために提供され、自転車の車輪側部に取り付けられ、車輪の摩擦により駆動され発電する発電機装置を利用し、導線で発生した電器を整流変圧器で必要な電流に変換した後に、携帯電話、ページャ、ラジオ、携帯情報端末装置或いは二次電池等の携帯型電器設備に接続し、自転車に乗って外出する時に、携帯型電器用品に簡単快速に電力供給と充電を行い、外出活動に便利で電力不足の心配をなくす経済的で実用的な装置に関する。

【0002】**【従来の技術】**

エネルギー資源の節約と環境保護の観念の高まりにより、自転車の使用が再び提唱され、道路に限らず、山間の小道において、自転車は交通工具として代わるものない選択となっている。さらに入々がレジャーやエクササイズを重視するようになり、家庭での使用だけでなく、自転車に乗った会社員や警官、旅行者を多く見かけるようになった。別に、外出時に携帯する設備の不断の開発研究により、外出時でも随時情報を掌握し、相互に速やかに連絡したり場所に制限されず楽しめるようになり、外出時に携帯電話、ページャ、ラジオ、携帯情報端末、或いは二次電池を携帯することも多くなつた。しかしこのような携帯設備の電源は制限を受け、電池使用時間には一定の制限があり、携帯するのには重過ぎたり或いは体積の大き過ぎる電源供給装置或いは電池は非常に不便であり、事前に準備しておかなかつたり或いはうっかり忘れると、携帯設備を使用できなくなる不便な状況があり、このため研究改良の必要がある。

【0003】**【考案が解決しようとする課題】**

本考案の主要な目的は、一種の自転車の電力供給及び充電装置を提供することにあり、それは自転車の車輪側部に取り付けられ、車輪の摩擦により発電する発

電機装置を利用し、導線で発生した電気を整流変圧器で必要な電流に変換した後、さらに携帯電話、ページャ、ラジオ、携帯情報端末、或いは二次電池等の携帯型電器設備に外接し、自転車に乗って外出する時に、携帯型物品に簡単快速に電力供給又は充電でき、これにより外出活動に便利で電力不足の心配をする必要をなくす装置であるものとする。

【0004】

本考案の次の目的は、一種の自転車の電力供給及び充電装置を提供することにあり、それは整流変圧器と携帯型電器設備の間が、挿入式の連接線で相互に連結され、異なるプラグ端子を組み合わせた連接線に交換することにより携帯型電器設備に組み合わせて使用できる経済的で実用的な装置であるものとする。

【0005】

【課題を解決するための手段】

請求項1の考案は、自転車の電力供給及び充電装置において、該自転車の電力供給及び充電装置は、発電機装置、整流変圧器及び携帯型電器設備が組み合わされてなり、該発電機装置が自転車の車輪側部に取り付けられて車輪の摩擦により駆動されて発電し、導線で発生した電気が整流変圧器に送られて対応する電流及び電圧に変換され、更に携帯電話、ページャ、ラジオ、携帯情報端末、或いは二次電池等の携帯型電器設備に外接されることを特徴とする、自転車の電力供給及び充電装置としている。

請求項2の考案は、請求項1に記載の自転車の電力供給及び充電装置において、整流変圧器と携帯型電器設備の間が挿入式の連接線で連結され、異なる形式の連接端子を具えた携帯型電器設備との連接使用に供されることを特徴とする、自転車の電力供給及び充電装置としている。

請求項3の考案は、請求項1に記載の自転車の電力供給及び充電装置において、整流変圧器が調整式の構造とされて、交流、直流或いは異なる電圧出力に切り換えられることを特徴とする、自転車の電力供給及び充電装置としている。

請求項4の考案は、請求項1に記載の自転車の電力供給及び充電装置において、発電機装置の発生する電気が切り替えスイッチの切り換えにより自転車の前照灯或いは整流変圧器に出力されることを特徴とする、自転車の電力供給及び充電

装置としている。

【0006】

【考案の実施の形態】

添付された各図に示されるように、本考案は、発電機装置1、整流変圧器2及び携帯型電器設備3が組み合わされてなり、そのうち、発電機装置1は自転車10の車輪11側部に取り付けられ、自転車10が行進する時に車輪11の摩擦により駆動され発電する装置であり、この装置はすでに自転車10に取り付けられており、自転車の前照灯12に電力供給して照明に使用し、発電機装置1は導線13によりその発生した電気が整流変圧器2に送られ、整流変圧器2により対応する電流及び電圧に変換された後、さらに携帯電話、ページャ、ラジオ、携帯情報端末、或いは二次電池に外接され、必要時に導線13は図示されるように前照灯12を並列に連接させ、切り替えスイッチ16により切り換えることができるものとされる。整流変圧器2はまた調整式構造とされ得て、交流と直流を切り換えるか或いは異なる電圧を出力できるものとされる。また、整流変圧器2と携帯型電器設備3の間は挿入式の連接線14で連結可能で、これにより異なる形式のプラグ端子15を組み合わせた連接線14に交換することにより、異なる携帯型電器設備3に連接して使用でき、工場での量産及び販売者の購入とストックに便利である。

【0007】

自転車に乗って外出する時、まず発電機装置1及び整流変圧器2を車輪11側部と車体フレームに取り付け、並びに必要により対応するホルダを取り付けて携帯型電器設備3を挟み付け、その後、対応する連接線14で携帯型電器設備3と整流変圧器2を連接させ、さらに整流変圧器2を必要な交流或いは直流及び電圧出力に切り換え、携帯型電器設備3に電力供給又は充電が必要な時は、僅かに発電機装置1を回転させて車輪11に接触させれば、車輪11が回転すると同時に、摩擦方式で発電機装置1を駆動し発電させ、こうして発生した電流が導線13で整流変圧器2に送られ、対応する電流と電圧に変換されて出力され、連接線14のプラグ端子15により携帯型電器設備3に送られる。こうして自転車に乗って外出する時、携帯型電器設備3に簡単、快速に電力供給或いは充電が行え、外

出活動に便利で且つ電力不足により携帯型電器設備3が使用不能となる不便な状況を心配する必要を無くすことができる。

【0008】

以上の実施例は本考案の実施範囲を限定するものではなく、本考案に基づきなしうる細部の修飾或いは改変は、いずれも本考案の請求範囲に属するものとする。

【0009】

【考案の効果】

本考案の自転車の電力供給及び充電装置は、自転車の車輪側部に取り付けられて車輪の摩擦により駆動され発電する発電機装置を利用し、導線で発生した電気を整流変圧器に送り対応する電流と電圧に変換した後、携帯電話、ページャ、ラジオ、携帯情報端末装置或いは二次電池等の携帯型電器設備に供給し、自転車に乗る時、携帯型電器用品に簡単快速に電力供給と充電が行え、コンパクトで、電力不足状況を心配する必要をなくす。

* NOTICES *

JPO and NCIPI are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
 2. **** shows the word which can not be translated.
 3. In the drawings, any words are not translated.
-

CLAIMS

[Utility model registration claim]

[Claim 1] In the electric power supply and charging equipment of a bicycle the electric power supply and charging equipment of this bicycle It comes to put generator equipment, a rectifier transformer, and a pocket mold electrical machinery facility together. This generator equipment is attached in the wheel flank of a bicycle, drive by friction of a wheel, and it generates electricity. The electric power supply and charging equipment of a bicycle which are changed into the current and electrical potential difference to which the electrical and electric equipment generated with lead wire is sent to a rectifier transformer, and corresponds, and are characterized by being further circumscribed to a pocket mold electrical machinery facility of a cellular phone, a pager, radio, a Personal Digital Assistant, or a rechargeable battery.

[Claim 2] The electric power supply and charging equipment of a bicycle which between a rectifier transformer and pocket mold electrical machinery facilities is connected by the connection line of an insertion type, and are characterized by presenting a connection activity with the pocket mold electrical machinery facility equipped with the connection terminal of a different format in the electric power supply and charging equipment of a bicycle according to claim 1.

[Claim 3] The electric power supply and charging equipment of a bicycle which are characterized by being switched to an alternating current, a direct current, or a different voltage output in the electric power supply and charging equipment of a bicycle according to claim 1, a rectifier transformer being used as the structure of an adjustment type.

[Claim 4] The electric power supply and charging equipment of a bicycle which are characterized by the electrical and electric equipment which generator equipment generates being outputted to the headlight or rectifier transformer of a bicycle by switch of a transfer switch in the electric power supply and charging equipment of a bicycle according to claim 1.

[Translation done.]

DETAILED DESCRIPTION

[Detailed explanation of a design]

[0001]

[The technical field to which a design belongs]

When this design starts a kind of electric power supply and charging equipment of a bicycle and it rides on a bicycle especially It is provided in order to solve an electric power supply and the problem of whether to charge to a pocket mold electrical machinery supply how. The generator equipment which is attached in the wheel flank of a bicycle, drives by friction of a wheel, and is generated is used. After transforming into a required current the electrical machinery generated with lead wire with a rectifier transformer, a cellular phone, It connects [facility / a pager, radio, Personal Digital Assistant equipment, or a rechargeable battery / pocket mold electrical machinery], and when riding and going out on a bicycle, a pocket mold electrical machinery supply is charged with an electric power supply at easy high speed, and it is convenient for going-out activities, and is related with the economical and practical equipment which loses worries about a power failure.

[0002]

[Description of the Prior Art]

The activity of a bicycle is again advocated by economization of an energy resource, and rise of the idea of environmental protection, and in the alley of not only a route but a gap, although a bicycle replaces as a traffic tool, it serves as selection which is not. Furthermore, people come to think leisure and exercise as important and came to see many office workers who rode not only on an activity at home but on the bicycle, policemen, and travelers. Independently, by the constant development research of the facility carried at the time of going out, also in the time of going out, information is held at any time, it can connect mutually promptly, or it is not restricted to a location, but it can be enjoyed now, and a cellular phone, a pager, radio, the Personal Digital Assistant, or the rechargeable battery was also carried more often at the time of going out. However, when the power source of such a pocket facility receives a limit, and a cell time has a fixed limit, and the too large power supply unit or cell of the volume is dramatically inconvenient to carry, and it does not prepare in advance or you forget [**** / being too heavy] carelessly, there is an inconvenient situation it becomes impossible to use a pocket facility, and, for this reason, there is the need for research amelioration.

[0003]

[Problem(s) to be Solved by the Device]

The main objects of this design are to offer a kind of electric power supply and charging equipment of a bicycle. It is attached in the wheel flank of a bicycle and the generator equipment generated by friction of a wheel is used. After transforming into a required current the electrical and electric equipment generated with lead wire with a rectifier transformer, further A cellular phone, When it circumscribes to a pocket mold electrical machinery facility of a pager, radio, a Personal Digital Assistant, or a rechargeable battery and rides and goes out on a bicycle, it shall be equipment which can charge and abolishes by this an electric power supply or the need of it being convenient for going-out activities, and worrying about a power failure, in a pocket molded product article at easy high speed.

[0004]

It shall be economical and practical equipment which can be used for a pocket mold electrical machinery facility, combining by the next object of this design being offering a kind of electric power supply and charging equipment of a bicycle, and exchanging it for the connection line by which between a rectifier transformer and pocket mold electrical machinery facilities combined a plug terminal which is mutually connected by the connection line of an insertion type, and is different.

[0005]

[Means for Solving the Problem]

The design of claim 1 is set to the electric power supply and charging equipment of a bicycle. The electric power supply and charging equipment of this bicycle It comes to put generator equipment, a rectifier transformer, and a pocket mold electrical machinery facility together. This generator equipment is attached in the wheel flank of a bicycle, drive by friction of a wheel, and it generates electricity. It is changed into the current and electrical potential difference to which the electrical and electric equipment generated with lead wire is sent to a rectifier transformer, and corresponds, and is considering as the electric power supply and charging equipment of a bicycle which are characterized by being further circumscribed to a pocket mold electrical machinery facility of a cellular phone, a pager, radio, a Personal Digital Assistant, or a rechargeable battery.

In the electric power supply and charging equipment of a bicycle according to claim 1, between a rectifier transformer and pocket mold electrical machinery facilities is connected by the connection line of an insertion type, and the design of claim 2 is taken as the electric power supply and charging equipment of a bicycle which are characterized by presenting a connection activity with the pocket mold electrical machinery facility equipped with the connection terminal of a different format.

In the electric power supply and charging equipment of a bicycle according to claim 1, it is using the design of claim 3 as the electric power supply and charging equipment of a bicycle which are characterized by being switched to an alternating current, a direct current, or a different voltage output, a rectifier transformer being used as the structure of an adjustment type.

The design of claim 4 is taken as the electric power supply and charging equipment of a bicycle which are characterized by the electrical and electric equipment which generator equipment generates being outputted to the headlight or rectifier transformer of a bicycle by switch of a transfer switch in the electric power supply and charging equipment of a bicycle according to claim 1.

[0006]

[The gestalt of implementation of a design]

As shown in each attached drawing, this design It comes to put generator equipment 1, a rectifier transformer 2, and the pocket mold electrical machinery facility 3 together. Among those, generator equipment 1 is attached in wheel 11 flank of a bicycle 10. It is equipment which drives by friction of a wheel 11 and is generated when a bicycle 10 marches. This equipment is already attached in the bicycle 10, carry out an electric power supply to the headlight 12 of a bicycle, and it is used for lighting. As for generator equipment 1, the generated electrical and electric equipment is sent to a rectifier transformer 2 with lead wire 13. After being changed into the current and electrical potential difference which correspond with a rectifier transformer 2, further A cellular phone, It shall be circumscribed to a pager, radio, a Personal Digital Assistant, or a rechargeable battery, lead wire 13 shall make juxtaposition connect a headlight 12 at the time of the need, so that it may be illustrated, and it shall be switched by the transfer switch 16. or [switching an alternating current and a direct current by making a rectifier transformer 2 into adjustment type structure again] -- or a different electrical potential difference shall be outputted Moreover, it can connect by the connection line 14 of an insertion type between a rectifier transformer 2 and the pocket mold electrical machinery facility 3, and it can be used, connecting [line / 14 / which combined the plug terminal 15 of a different format by this / connection] it at different pocket mold electrical machinery facility 3 by exchanging, and is convenient for the mass production in works, and purchase and stock of a vender.

[0007]

When riding and going out on a bicycle, generator equipment 1 and a rectifier transformer 2 are first attached in wheel 11 flank and a car-body frame. Attach the holder corresponding to a list as occasion demands, and the pocket mold electrical machinery facility 3 is inserted. Then, the pocket mold electrical machinery facility 3 and a rectifier transformer 2 are made to connect by the corresponding connection line 14. Furthermore, a rectifier transformer 2 to a switch and the pocket mold electrical machinery facility 3 at a required alternating current or a direct current, and a voltage output when an electric power supply or charge is required At the same time a wheel 11 will rotate, if generator equipment 1 is rotated slightly and a wheel 11 is made to contact Generator equipment 1 is made to drive and generate by the friction method, with lead wire 13, the current generated in this way is sent to a rectifier transformer 2, and is changed and outputted to a corresponding current and a corresponding electrical potential difference, and it is sent to the pocket mold electrical machinery facility 3 with the plug terminal 15 of the connection line 14. In this way, when riding and going out on a bicycle, an electric power supply or charge can be performed to

simplicity and high speed at the pocket mold electrical machinery facility 3, it is convenient for going-out activities, and the need of worrying about the inconvenient situation that it becomes impossible by the power failure using the pocket mold electrical machinery facility 3 can be abolished.

[0008]

The above example shall not limit the operation range of this design, and each the qualification or the alteration of details which can be made based on this design shall belong to the generic claim of this design.

[0009]

[Effect of the Device]

The generator equipment which the electric power supply and charging equipment of a bicycle of this design are attached in the wheel flank of a bicycle, drives by friction of a wheel, and is generated is used. After changing into a rectifier transformer the electrical and electric equipment generated with lead wire at the current and electrical potential difference which carry out a delivery response, When supplying a pocket mold electrical machinery facility of a cellular phone, a pager, radio, Personal Digital Assistant equipment, or a rechargeable battery and riding on a bicycle, a pocket mold electrical machinery supply can be charged with an electric power supply at easy high speed, it is compact and the need of worrying about a power-failure situation is abolished.

[Translation done.]